



GGCTCATGCT	CGGGAGCGTG	GTGAGCGGGC	TGGCTGGGGT	TGGCTGGGGC	TGGCTGGGGT	GTGAGCGGGC	GGCTCATGCT
I	D	I	G	K	E	Y	I
ATC	GAC	ATA	GGA	AAA	GAG	TAT	ATC
T	S	T	S	G	T	H	R
ACC	AGC	ACT	TCT	GGG	ACG	CAC	AGA
L	E	C	Q	D	A	L	E
TTG	GAA	TGC	CAA	GAT	GCC	TTG	GAA
S	M	H	S	Q	L	R	I
TCC	ATG	CAT	TCT	CAG	CTC	AGA	ATC
G	L	S	A	L	K	P	I
GGC	TTG	AGT	GCT	CTG	AAG	CCC	ATC
A	G	L	F	S	C	M	T
GCT	GGG	CTT	TTT	TCC	TGT	ATG	ACT
K	K	G	E	L	S	M	E
AAG	AAG	GGG	GAG	CTC	TCA	ATG	GAA
V	N	C	R	R	L	E	R
GTG	AAC	TGC	AGA	AGA	CTA	GAG	AGA
A	A	A	S	L	R	V	V
GCT	GCT	TCC	CTG	CGA	AGG	GTT	GTT
3	124	23	184	43	244	63	183
GAATTCTGAT	GTGAAACTAA	CAGTCTGTGA	GGCCCTGGAAC	CTCCCACTCAG	AGAAAG	ATG	AAG
I	D	I	G	K	E	Y	I
ATC	GAC	ATA	GGA	AAA	GAG	TAT	ATC
T	S	T	S	G	T	H	R
ACC	AGC	ACT	TCT	GGG	ACG	CAC	AGA
L	E	C	Q	D	A	L	E
TTG	GAA	TGC	CAA	GAT	GCC	TTG	GAA
S	M	H	S	Q	L	R	I
TCC	ATG	CAT	TCT	CAG	CTC	AGA	ATC
G	L	S	A	L	K	P	I
GGC	TTG	AGT	GCT	CTG	AAG	CCC	ATC
A	G	L	F	S	C	M	T
GCT	GGG	CTT	TTT	TCC	TGT	ATG	ACT
K	K	G	E	L	S	M	E
AAG	AAG	GGG	GAG	CTC	TCA	ATG	GAA
V	N	C	R	R	L	E	R
GTG	AAC	TGC	AGA	AGA	CTA	GAG	AGA
A	A	A	S	L	R	V	V
GCT	GCT	TCC	CTG	CGA	AGG	GTT	GTT
3	124	23	184	43	244	63	183
M	K	D	R	R	T	R	I
GA	AT	G	A	G	T	T	S
AT	AT	AT	AT	AT	AT	AT	AT
3	124	23	184	43	244	63	183

FIG. 1A

V	C	L	M	I	T	Q	I	A	G	F	S	G	P	A	F	M	V	K	H	203
GTG	TGC	CTG	ATG	ATC	ACG	CAG	CTG	GCT	GGC	TTC	AGT	GGA	CCA	GCC	TTC	ATG	GTG	AAA	CAC	724
L	L	E	Y	T	Q	A	T	E	S	N	L	Q	Y	S	L	L	V	L	V	223
CTC	TTG	GAG	TAT	ACC	CAG	GCA	ACA	GAG	TCT	AAC	CTG	CAG	TAC	AGC	TTG	TTG	TTA	GTG	CTG	784
G	L	L	L	T	E	I	V	R	S	W	S	L	A	L	T	W	A	L	N	243
GGC	CTC	CTC	CTG	ACG	GAA	ATC	GTG	CGG	TCT	TGG	TCG	CTT	GCA	CTG	ACT	TGG	GCA	TTG	AAT	844
Y	R	T	G	V	R	L	R	G	A	I	L	T	M	A	F	K	I	L	263	
TAC	CGA	ACC	GGT	GTC	CGC	TTG	CGG	GGG	GGC	ATC	CTA	ACC	ATG	GCA	TTT	AAG	AAG	ATC	CTT	904
K	L	K	N	I	K	E	K	S	L	G	E	L	I	N	I	C	S	N	D	283
AAG	TTA	AAG	AAC	ATT	AAA	GAG	AAA	TCC	CTG	GGT	GAG	CTC	ATC	AAC	ATT	TGC	TCC	AAC	GAT	964
G	Q	R	M	F	E	A	A	V	G	S	L	L	A	G	G	P	V	V	V	303
GGG	CAG	AGA	ATG	TTT	GAG	GCA	GCA	GCC	GTT	GGC	AGC	CTG	CTG	GCT	GGA	GGA	CCC	GTT	GTT	1024
A	I	L	G	M	I	Y	N	V	I	I	L	G	P	T	G	F	L	G	S	323
GCC	ATC	TTA	GGC	ATG	ATT	TAT	AAT	GTA	ATT	ATT	CTG	GGA	CCA	ACA	GGC	TTC	CTG	GGA	TCA	1084
A	V	F	I	L	F	Y	P	A	M	M	F	A	S	R	L	T	A	Y	F	343
GCT	GTT	TTT	ATC	CTC	TTT	TAC	CCA	GCA	ATG	ATT	GCA	TCA	CGG	CTC	ACA	GCA	TAT	TTC		1144
R	R	K	C	V	A	T	D	E	R	V	Q	K	M	N	E	V	L	T	363	
AGG	AGA	AAA	TGC	GTG	GCC	GCC	ACG	GAT	GAA	CGT	GTC	CAG	AAG	ATG	AAT	GAA	GTT	CTT	ACT	1204
Y	I	K	F	I	K	M	Y	A	W	V	K	A	F	S	Q	S	V	Q	K	383
TAC	ATT	AAA	TTT	ATC	AAA	ATG	TAT	GCC	TGG	GTC	AAA	GCA	TTT	TCT	CAG	AGT	GTT	CAG	AAA	1264
I	R	E	E	R	R	I	L	E	K	A	G	Y	F	Q	S	I	T	V	403	
ATC	CGC	GAG	GAG	CGT	CGG	ATA	TTG	GAA	AAA	GCC	GGG	TAC	TTC	CAG	AGC	ATC	ACT	GTG	1324	

FIG. 1B

G	V	A	P	I	V	V	I	A	S	V	V	T	F	S	V	H	M	T	423	
GGT	GTC	GCT	CCC	ATT	GTC	GTC	GTC	ATT	GCC	AGC	GTC	GTC	ACC	TTC	TCT	GTC	CAT	ATG	ACC	1384
L	G	F	D	L	T	A	A	Q	A	F	T	V	V	T	V	F	N	S	M	443
CTG	GGC	TTC	GAT	CTG	ACA	GCA	GCA	CAG	GCT	TTC	ACA	GTC	GTC	TTC	AAT	TCC	ATG			1444
T	F	A	L	K	V	T	P	F	S	V	K	S	L	S	E	A	S	V	A	463
ACT	TTT	GCT	TTG	AAA	GTA	ACA	CCG	TTT	TCA	GTA	AAG	TCC	CTC	TCA	GAA	GCC	TCA	GTG	GCT	1504
V	D	R	F	K	S	L	F	L	M	E	E	V	H	M	I	K	N	K	P	483
GTT	GAC	AGA	TTT	AAG	AGT	TTG	TTT	CTA	ATG	GAA	GAG	GTT	CAC	ATG	ATA	AAG	AAA	CCA		1564
A	S	P	H	I	K	I	E	M	K	N	A	T	L	A	W	D	S	S	H	503
GCC	AGT	CCT	CAC	ATC	AAG	ATA	GAG	ATG	AAA	AAT	GCC	ACC	TTG	GCA	TGG	GAC	TCC	TCC	CAC	1624
S	S	I	Q	N	S	P	K	L	T	P	K	M	K	K	D	K	R	A	S	523
TCC	AGT	ATC	CAG	AAC	TCG	CCC	AAG	CTG	ACC	CCC	AAA	ATG	AAA	AAA	GAC	AAG	AGG	GCT	TCC	1684
R	G	K	K	E	K	V	R	Q	L	Q	R	T	E	H	Q	A	V	L	A	543
AGG	GGC	AAG	AAA	GAG	AAG	GTC	AGG	CAG	CTG	CAG	CGC	ACT	GAG	CAT	CAG	GCG	GTG	CTG	GCA	1744
E	Q	K	G	H	L	L	D	S	D	E	R	P	S	P	E	E	E	E	E	563
GAG	CAG	AAA	GGC	CAC	CTC	CTG	GAC	AGT	GAC	GAG	CGG	CCC	AGT	CCC	GAA	GAG	GAA	GAA		1804
G	K	H	I	H	L	G	H	L	R	L	Q	R	T	L	H	S	I	D	L	583
GGC	AAG	CAC	ATC	CAC	CTG	GGC	CAC	CTG	CGC	TTA	CAG	AGG	ACA	CTG	CAC	AGC	ATC	GAT	CTG	1864
E	I	Q	E	G	K	L	V	G	I	C	G	S	V	G	S	G	K	T	S	603
GAG	ATC	CAA	GAG	GGT	AAA	CTG	GTC	GTC	ATC	TGC	GGC	AGT	GTG	GGA	AGT	GGA	AAA	ACC	TCT	1924
L	I	S	A	I	L	G	Q	M	T	L	L	E	G	S	I	A	I	S	G	623
CTC	ATT	TCA	GCC	ATT	TTA	GGC	CAG	ATG	ACG	CTT	CTA	GAG	GGC	AGC	ATT	GCA	ATC	AGT	GGA	1984

FIG. 1C

T	F	A	Y	V	A	Q	A	W	I	L	N	A	T	L	R	D	N	I	643	
ACC	TTC	GCT	TAT	GTC	GCC	CAG	CAG	TGG	ATC	CTC	AAT	GCT	ACT	CTG	AGA	GAC	AAC	ATC	2044	
L	F	G	K	E	Y	D	E	E	R	Y	N	S	V	L	N	S	C	C	663	
CTG	TTT	GGG	AAG	GAA	TAT	GAT	GAA	AGA	TAC	AAC	TCT	GTG	CTG	AAC	AGC	TGC	TGC	CTG	2104	
R	P	D	L	A	I	L	P	S	S	D	L	T	E	I	G	E	R	G	683	
AGG	CCT	GAC	CTG	GCC	ATT	CTT	CCC	AGC	AGC	GAC	CTG	ACG	GAG	ATT	GGA	GAG	CAG	GCC	2164	
N	L	S	G	G	Q	R	Q	R	I	S	L	A	R	A	L	Y	S	D	703	
AAC	CTG	AGC	GGT	GGG	CAG	CGC	CGC	CAG	AGG	ATC	AGC	CTT	GCC	CGG	GCC	TTG	TAT	AGT	GAC	AGG
S	I	Y	I	L	D	D	P	L	S	A	L	D	A	H	V	G	N	H	703	
AGC	ATC	TAC	ATC	CTG	GAC	GAC	CCC	CTC	AGT	GCC	TTA	GAT	GCC	CAT	GTG	GGC	AAC	CAC	2224	
F	N	S	A	I	R	K	H	L	K	S	K	T	V	L	F	V	T	H	723	
TTC	AAT	AGT	GCT	ATC	CGG	AAA	CAT	CTC	AAG	TCC	AAG	ACA	GTT	CTG	TTT	GTT	ACC	CAC	2284	
L	Q	Y	L	V	D	C	D	E	V	I	F	M	K	E	G	C	I	T	743	
TTA	CAG	TAC	CTG	GTT	GAC	TGT	GAT	GAA	GTC	ATC	TTC	ATG	AAA	GAG	GGC	TGT	ATT	ACG	2344	
R	G	T	H	E	E	L	M	N	L	N	G	D	Y	A	T	I	F	N	783	
AGA	GGC	ACC	CAT	GAG	GAA	CTG	ATG	AAT	TTA	AAT	GGT	GAC	TAT	GCT	ACC	ATT	TTT	AAT	2464	
L	L	L	G	E	T	P	P	V	E	I	N	S	K	K	E	T	S	G	803	
CTG	TTG	CTG	GGA	GAG	ACA	CCG	CCA	GTT	GAG	ATC	AAT	TCA	AAA	AAG	GAA	ACC	AGT	GGT	2524	
Q	K	K	S	Q	D	K	G	P	K	T	G	S	I	K	E	K	A	V	823	
CAG	AAG	AAG	TCA	CAA	GAC	AAG	GGT	CCT	AAA	ACA	GGA	TCA	ATA	AAG	AAG	GAA	AAA	GCA	2584	
K	P	E	E	G	Q	L	V	Q	L	E	E	K	G	Q	G	S	V	P	843	
AAG	CCA	GAG	GAA	GGG	CAG	CTT	GTG	CAG	CTG	GAA	GAG	AAA	GGG	CAG	GGT	TCA	GTG	CCC	TGG	2644

FIG. 1D

S	V	Y	G	V	Y	I	Q	A	A	G	G	P	L	A	F	L	V	I	M	863
TCA	GTA	TAT	GGT	GTC	TAC	ATC	CAG	GCT	GCT	GGG	GGC	CCC	TTG	GCA	TTC	CTG	GTT	ATT	ATG	2704
A	L	F	M	L	N	V	G	S	T	A	F	S	T	W	W	L	S	Y	W	883
GCC	CTT	TTC	ATG	CTG	ATG	AAT	GTA	GGC	AGC	ACC	GCC	TTC	AGC	ACC	TGG	TGG	TG	TAC	TGG	2764
I	K	Q	G	S	G	N	T	T	V	T	R	G	N	E	T	S	V	S	D	903
ATC	AAG	CAA	GGA	AGC	GGG	AAC	ACC	ACT	GTG	ACT	CGA	GGG	AAC	GAG	ACC	TCG	GTG	AGT	GAC	2824
S	M	K	D	N	P	H	M	Q	Y	Y	A	S	I	Y	A	L	S	M	A	923
AGC	ATG	AAG	GAC	AAT	CCT	CAT	ATG	CAG	TAC	TAT	GCC	AGC	ATC	TAC	GCC	CTC	TCC	ATG	GCA	2884
V	M	L	I	L	K	A	I	R	G	V	V	F	V	K	G	T	L	R	A	943
GTC	ATG	CTG	ATC	CTG	AAA	GCC	ATT	CGA	GGA	GTT	GTC	TTT	GTC	AAG	GGC	ACG	CTG	CGA	GCT	2944
S	S	R	L	H	D	E	L	F	R	R	I	L	R	S	P	M	K	F	F	963
TCC	TCC	CGG	CTG	CAT	GAC	GAG	CTT	TTC	CGA	AGG	ATC	CTT	CGA	AGC	CCT	ATG	AAG	TTT	TTT	3004
D	T	T	P	T	G	R	I	L	N	R	F	S	K	D	M	D	E	V	D	983
GAC	ACG	ACC	CCC	ACA	GGG	AGG	ATT	CTC	AAC	AGG	TTT	TCC	AAA	GAC	ATG	GAT	GAA	GTT	GAC	3064
V	R	L	P	F	Q	A	E	M	F	I	Q	N	V	I	L	V	F	F	C	1003
GTG	CGG	CTG	CCG	TTC	CAG	GCC	GAG	ATG	TTC	ATC	CAG	AAC	GTT	ATC	CTG	GTG	TTC	TTC	TGT	3124
V	G	M	I	A	G	V	F	P	W	F	L	V	A	V	G	P	L	V	I	1023
GTG	GGA	ATG	ATC	GCA	GGA	GTC	TTC	CCG	TGG	TTC	CTT	GTG	GCA	GTG	GGG	CCC	CTT	GTC	ATC	3184
L	F	S	V	L	H	I	V	S	R	V	L	I	R	E	L	K	R	L	D	1043
CTC	TTT	TCA	GTC	CTG	CAC	ATT	GTC	TCC	AGG	GTC	CTG	ATT	CGG	GAG	CTG	AAG	CGT	CTG	GAC	3244
N	I	T	Q	S	P	F	L	S	H	I	T	S	S	I	Q	G	L	A	T	1063
AAT	ATC	ACG	CAG	TCA	CCT	TTC	CTC	CAC	ATC	ACG	TCC	AGC	ATA	CAG	GGC	CTT	GCC	ACC	3304	

FIG. 1E

I	H	A	Y	N	K	G	Q	E	F	L	H	R	Y	Q	E	L	L	D	D	1083
ATC	CAC	GCC	TAC	ATT	AAA	GGG	CAG	GAG	TTT	CTG	CAC	AGA	TAC	CAG	GAG	CTG	CTG	GAT	GAC	3364
N	Q	A	P	F	F	L	F	T	C	A	M	R	W	L	A	V	R	L	D	1103
AAC	CAA	GCT	CCT	TTT	TTT	TTG	TTT	ACG	TGT	GCG	ATG	CGG	TGG	CTG	GCT	GTG	CGG	CTG	GAC	3424
L	I	S	I	A	L	I	T	T	T	G	L	M	I	V	L	M	H	G	Q	1123
CTC	ATC	AGC	ATC	GCC	CTC	ATC	ACC	ACC	ACG	GGG	CTG	ATG	ATC	GGG	CTT	ATG	CAC	GGG	CAG	3484
I	P	P	A	Y	A	G	L	A	I	S	Y	A	V	Q	L	T	G	L	F	1143
ATT	CCC	CCA	GCC	TAT	GGG	GGT	CTC	GCC	ATC	TCT	TAT	GCT	GTC	CAG	TTA	ACG	GGG	CTG	TTC	3544
Q	F	T	V	R	L	A	S	E	T	E	A	R	F	T	S	V	E	R	I	1163
CAG	TTT	ACG	GTC	AGA	CTG	GCA	TCT	GAG	ACA	GAA	GCT	CGA	TTC	ACC	TCG	GTG	GAG	AGG	ATC	3604
N	H	Y	I	K	T	L	S	L	E	A	P	A	R	I	K	N	K	A	P	1183
AAT	CAC	TAC	ATT	AAG	ACT	CTG	TCC	TTG	GAA	GCA	CCT	GCC	AGA	ATT	AAG	AAC	AAG	GCT	CCC	3664
S	P	D	W	P	Q	E	G	E	V	T	F	E	N	A	E	M	R	Y	R	1203
TCC	CCT	GAC	TGG	CCC	CAG	GAG	GGG	GAG	GTG	ACC	TTT	GAG	AAC	GCA	GAG	ATG	AGG	TAC	CGA	3724
E	N	L	P	L	V	L	K	K	V	S	F	T	I	K	P	K	E	K	I	1223
GAA	AAC	CTC	CCT	CTC	GTC	CTA	AAG	AAA	GTA	TCC	TTC	ACG	ATC	AAA	CCT	AAA	GAG	AAG	ATT	3784
G	I	V	G	R	T	G	S	G	K	S	S	L	G	M	A	L	F	R	L	1243
GGC	ATT	GTG	GGG	GGG	ACA	GGA	TCA	GGG	AAG	TCC	TCG	CTG	GGG	ATG	GCC	CTC	TTC	CGT	CTG	3844
V	E	L	S	G	G	C	I	K	I	D	G	V	R	I	S	D	I	G	L	1263
GTG	GAG	TAA	TCT	GGA	GGC	TGC	ATC	AAG	ATT	GAT	GGG	GTG	AGA	ATC	AGT	GAT	ATT	GGC	CTT	3904
A	D	L	R	S	K	L	S	I	I	P	Q	E	P	V	L	F	S	G	T	1283
GCC	GAC	CTC	CGA	AGC	AAA	CTC	TCT	ATC	ATT	CCT	CAA	GAG	CCG	GTG	CTG	TTC	AGT	GGC	ACT	3964

FIG. 1F

FIG. 1G

inputs	MAIRGFCSDGSDPLWDNVNTWNNTSNP	DFTKCFQNTV	LWVPCFYLWACFPFYFLYLSRH																											
	10	20	30	40	50	60																								
																								
inputs	DRGYIQMTPLNKTKTALGFLIWIVCWADLFYSFWERSRGIFALAPVFLVSPTLLGITLLA																													
	70	80	90	100	110	120																								
																								
inputs	TFLIQLERRKGVQSSGIMLTFWLVALVCA	LAI	RSKIMT	FALKE	-DAQV	DLF	FRDITFYYVF																							
	130	140	150	160	170																									
																								
	SGTHR	DRED	SKFRR	TRP	LE	CGDA	LETAA	AEG	SQLR	I	DEE	H	P	K	G	K	Y	H	G	L	S									
	30	40	50	60	70	80																								
	30	40	50	60	70	80																								
	180	190	200	210	220	230																								
																								
inputs	SLLIQVLVLS	CFS	DRSP	PLF	SETI	IHD	PN	PCPES	-SAS	FLS	RIT	FWW	WTG	LIV	RG	-YR	QPLE													
								
	240	250	260	270	280	290																								
																								
inputs	G-SDLW	SLNK	EDT	SE	QV	V	P	VLV	-KNW	K	KE	A	K	T	R	Q	P	V	V	S	S	K	D	P	-AQ	PK	-ESS	KV	DA	
	90	100	110	120	130	140																								

FIG. 2A

inputs N--EEV--EALIVKSPQEWNPSLEFKVLYKTFFKAIFLMSFFFFKAIHDLMMSGPQIL-KL
 :
 RRIERLWQEEELNEVGPD---AASLRRVVWIFCRTRLLSIVCLMITQLAGFSGPAPFMVKH
 150 160 170 180 190 200

300 310 320 330 340

350 360 370 380 390 400

inputs LIKFVNNDTKAPDWQGYFYTVL-LFVTAQCLQTLVHQYFHCFCVSGMRIKTAIGAVYRKA
 :
 LLEYTQAT-ESNLQYSLLIWGLLITEIVRSWSLALTWALNYRTGVRURGAILTMAFKKKI
 210 220 230 240 250 260

410 420 430 440 450 460

inputs LVITNSARKSSTVGEIVNLMSDAQRFMQLATYINMIWASPLQVILALYLLWLNLGPNSVL
 :
 LKLKN--IKEKSLGELINICSDGQRMFEAAAVGSLLAGGPVVAILGMIYNVILGPTGF
 270 280 290 300 310 320

470 480 490 500 510 520

inputs AGVAVMVLMPVNAAVMKTKTYQVAHMKSNDQRMFEAAAVGSLLAGGPVVAILGMIYNVILGPTGF
 :
 LGSAAVFILEFYPAMMFASRLTAYFRRKCVAAATDERVQKMNEVLTYIKFIKMYAWVKAFSQS
 330 340 350 360 370 380

530 540 550 560 570 580

inputs VLAIROEELKVLKKSAYLSAVGTFETWVCTPELVALCTFAYVVTIDENNILDAQTAFVSLA
 :
 VQKIREERRILEKAGYFQSITVGAPIVVVIASVVTFSVHMTLGFD--LTAAQAAFTVVT
 390 400 410 420 430

FIG. 2B

590	600	610	620
inputs	LFNIRFPLNILPMVISSIVQASVSLKRLR-IFL		-SHEBLE-----
...
...
440	450	460	470
			480
			490
...
630	640	650	
inputs	----PDSIERRP-----VKDGGGNTNSITVRN-----ATF-----TWARSD		
...
...
500	510	520	530
			540
			550
...
660	670	680	690
inputs	PP-----TLNGITFSIPEGALVAVVGQVGCGKSSLISALLAEMDKVEGH		700
...
...
560	570	580	590
			600
			610
...
710	720	730	740
inputs	VAIKGSVAYVPQQWIQNDSLRENILFGCQLEEPYYRSVIQACALLPDLIEILPSGDRTEI		
...
...
620	630	640	650
			660
			670
...
770	780	790	800
inputs	GEKGVNLSGGQQKQRVSLARAVYSNADIYLFFDPLSAVDAAHVGKHIENVIGPKGMLKNKT		820
...
...
680	690	700	710
			720
			730

FIG. 2C

FIG. 2D

1110 1120 1130 1140 1150 1160
 inputs IVILLAT-PIAAIIIPPLGLIYFFVQRFYVASSRQLKRIECSVRSRSPVYSHFNETILLGVSV
 :
 VGMIAVGVPFWFLVAVGPLVILFWSVLHIVSRVLIRELKRLDNITQSPFLSHITSSIQGLAT
 1010 1020 1030 1040 1050 1060

1170 1180 1190 1200 1210 1220
 inputs IRAFEQERFIHQSDLKVDENQKAYYPSIVANRWLAVRLECVGNICIVLFAALFAVISRHS
 :
 IHAYNKGQEFHLRYQELDDNQAPFFLFTCAMRWLAVRDLISIALITTTGLMIVLMHGQ
 1070 1080 1090 1100 1110 1120

1230 1240 1250 1260 1270 1280
 inputs LSAGLVGLSVSYSLQVTTYLNWLVRMSSMETNIVAVERLKEYSETEK-EAPWQIQETAP
 :
 IPPAYAGLAISYAVQLTGLFQFTVRLASETEARFTSVERINHYIKTLSLEAPARIKNKAP
 1130 1140 1150 1160 1170 1180

1290 1300 1310 1320 1330 1340
 inputs PSSWPQVGRVEFRNYCLRYREDLDFVLRHINVTINGGEKVGVGRTGAGKSSLTLGLFRI
 :
 SPDWPQEGETFENAEMRYRENPLVLLKVSFTIKPKEKIGIVGRTGSGKSSLGMAFLRI
 1190 1200 1210 1220 1230 1240

1350 1360 1370 1380 1390 1400
 inputs NESAEGEIIIDGGINIAKIGLHDLREKITIIPQDPVLFSGSLRMNLDPPFSQYSDEEVWTSI
 :
 VELSGGCIIKIDGVRISDIGLADLRSKLSIIPOQEPVLFSGTVRSNLDPPFNQYTEDQIWDAL
 1250 1260 1270 1280 1290 1300

FIG. 2E

inputs	ELAHLKDFVSALPDKL	1410	1420	1430	1440	1450	1460
	DHECAEGGENLSVGQRQLVCLARALLRKTKILVLDEATAAVDLE						
	ERTHMKCEIAQPLKLESEVMENGDNFNSVGERQILCIARALLRHCKKILILDEATAAMDTE						
		1310	1320	1330	1340	1350	1360
inputs	TDDLIQSTIRTQFEDCTVLTIAHRLNTIMDTRYVILDKGEIQEYGAPS DLL-QQRGLFY	1470	1480	1490	1500	1510	1520
	TDLLIQETIREAFADCTMIIAHLRHTVLGSDRIMVLAQGVVVEFDTPS VLLSDSSRFY						
		1370	1380	1390	1400	1410	1420
inputs	SM-AKDAGLV----	1530					
	AMFAAAEENKVAVKG						

FIG. 2F